



DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

4 December 1969

MEMORANDUM FOR CHAIRMAN, COMIREX

SUBJECT: Percent of Film From Mission 1108 for MC&G Purposes Outside
the Sino Soviet Area

1. DoD is presently using available KH-4 satellite photography for medium scale mapping and charting and general tactical support for the higher priority contingency areas outside the Sino Soviet totalling over 5 million square statute miles. While these areas, generally outside the tropical belt, are about 65% covered with satellite photography, the production of new mapping and charting is being thwarted because there are many gaps and slivers throughout the covered areas resulting in complete coverage on hand for only about 1/3 of the individual sheets. Suitable existing aerial photography can be used to fill out only about 15% of these sheets.

2. For proceeding with MC&G production, alternatives available include producing partial sheets, filling out remaining sheet areas with inadequate source materials, reorienting available aerial photo capability to complete gap areas, where possible, and completing gap areas with KH-4 [redacted] satellite photography. These alternatives are being evaluated to establish the best solution to this gap problem. A briefing including information given to you on 1 December is available for further explaining the gap problem, together with recent coverage analysis by NRO available in the intelligence and MC&G community.

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3. For mission 1108 the following is recommended:

a. That ICRS be instructed to place increased emphasis on collection for MC&G purposes outside the Sino Soviet area.

b. That ICRS and representatives of the MCGWG work together to establish the most efficient use of the film of mission 1108 in light of increased emphasis of paragraph 3.a. above.

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DIA review(s) completed.
NRO review(s) completed.

[redacted]
Chairman
COMIREX MC&G Working Group

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Ability of KH-4B System to Satisfy Critical MC&G Requirement
Gap Areas

Extracts from NRO cable responses to MC&G Working Group, 3 December, and as updated, 8 December 1969.

A study has been prepared regarding the ability of the KH-4B system to satisfy critical gap areas within the MC&G requirement area. These areas include small isolated slivers of territory in [redacted] totaling 13,020 linear nautical miles (referred to as Area "A"). Area "B", amounting to 4,620 linear nautical miles, is defined as Area "A" less those regions now politically open and those areas on which the potential for aircraft photography during the next two years exists. The approximate amounts of Areas "A" and "B" which could be satisfied, if various percentages of the total film available over a one-year period of five missions were allocated for this purpose, are set forth below:

<u>Percent Film Used Annually</u>	<u>Percent of Area Coverage Satisfied</u>	
	<u>Area "A"</u>	<u>Area "B"</u>
1	4.4	11.5
2	7.7	22.0
5	15.5	42.5
10	25.1	66.7
15	34.5	84.5
16	No data	85.7
17	No data	85.8
20	42.5	85.9
\$21.9	No data	85.9
30	55.6	No data
40	66.5	No data
50	75.1	No data
60	83.3	No data
70	86.5	No data
\$\$78.7	86.5	No data

\$ - Maximum amount which can be expended in Area "B"

\$\$ - Maximum amount which can be expended in Area "A"

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Tab E

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The film percentage figures of 78.7 and 21.9 represent the maximum amount that could be expended on Areas "A" and "B" as limited by the number of geometrical acquisitions to a given area in a year. All film percentage figures are based on the total annual standard thin-base filmload.

Camera operations were optimized to take the greatest advantage of climatology during the year and to obtain the most linear mileage for the least amount of film first, before expending larger amounts of film for the poorer weather regions. Percentages of area satisfaction reflect complete satisfaction of clusters of slivers and patches rather than an over-all satisfaction level of Area "A" or "B". For example, for five percent of the filmload, [redacted]

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[redacted] amounting to 15.5 and 42.5 percent of Areas "A" and "B" respectively. It is most important that these figures not be misused or misinterpreted. For example, if 10 percent of the film is allocated for a two-year period, 25.1 percent satisfaction in Area "A" cannot be expected for each year.

A complete world-wide climatorlogical file is being developed by ETAC but there is not one now available. Much of the climatological data used for this study was based on weather data representative of the areas under study which is often in different terminology and for various times of day. It should be recognized, therefore, that the figures are approximate, due primarily to sparsely located weather stations and incomplete cloud cover statistics in the areas under study.

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